

# SCHOLASTIC BOWL

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Full question set including toss-ups and bonuses.

## ROUND 1 SET 2

For use only on Month Date, Year

Tear bottom-right tag along dashed line upon use.

Questions written by

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# **Scholastic Bowl**

## Round 1 — Set 2

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The following are notes for moderators. Please note that these rules may be overridden by questions when indicated.

#### On reading

- Where appropriate, pronunciation guides have been provided.
- The moderator is to read each question exactly as written, emphasizing italicized words.
- When a player buzzes in, the moderator is to immediately stop reading.
- The moderator must use a consistent and reasonably slow reading pace. The moderator must also speak intelligibly and loud enough that all players can hear the question in its entirety. Players may stop the moderator at any time to request that the moderator speak louder or more clearly.

#### On answers

- The moderator is to accept only the answer indicated beneath a question.
- The bolded part of each answer is required to receive points. Other parts are optional.
- Brackets beside answers provide the moderator notes and additional information to assist with scoring (which may override the rules provided on this page).
- Unless the answer is a proper noun, the moderator must accept both singular and plural variants of an answer.
- “prompt”: The moderator will say *prompt* or indicate in some other way that additional information is required. The moderator may prompt multiple times on the same question as long as each subsequent answer provides more information than the last and each answer is correct.
- “this/these word(s) only”: The answer (or its required parts) must be said in isolation without any modifiers to receive points.
- “equivalent/descriptive answers”: The moderator must evaluate whether the response is equivalent in meaning to the indicated answer and award points accordingly.
- “also accept”: The moderator must also accept the indicated secondary answer(s).

#### On powerplays

- All toss-up questions contain the symbol (\*) which indicates the *powerplay* cutoff.
- When a toss-up is answered before the powerplay cutoff, the team which answered receives 15 (instead of 10) points for that toss-up.
- In the event that a player buzzes in before the powerplay cutoff, but the moderator stops reading too late, the powerplay bonus is awarded based on when the player buzzes in, not when the moderator stops reading.

Questions begin on the next page.

1. **MATH**

*These* processes are called greedy if they always make the locally optimal choice. Turing machines can execute any of *these* processes. Big O notation (\*) is used to describe the time and space complexity of *these* processes. For 10 points, name *these* finite, step-by-step sequences of unambiguous instructions that can be used to perform a computation.

ANSWER: algorithm [prompt on *program*]

1. **MISCELLANEOUS**

Name *these* 1990s bands with prominent drummers. For 10 points each,

A Dave Grohl drummed on hits like *Heart-Shaped Box* and *Smells Like Teen Spirit* for *this* band. He went on to form the Foo Fighters after the suicide of *this* band's lead singer, Kurt Cobain.

ANSWER: Nirvana

B Tré Cool replaced John Kiffmeyer in 1990 as *this* band's drummer. He drummed in hits like *Brain Stew*, *American Idiot*, and *Know Your Enemy*.

ANSWER: Green Day

C Chad Smith drummed for *this* band since 1988, producing hits such as *Snow*, *Under the Bridge*, and *Californication*.

ANSWER: Red Hot Chili Peppers

2. **SOCIAL SCIENCE**

Plato once referred to *these* animals as “the only featherless bipeds with broad, flat nails (\*).” A philosophical stance named after *these* animals was pioneered by Petrarch. Friedrich Nietzsche [Neet-shuh] claimed that *these* animals killed God. For 10 points, name *these* animals which were often the subject of Italian Renaissance art like the *Mona Lisa*.

ANSWER: humans

2. **SCIENCE**

In mechanical physics, almost all translation quantities have rotational analogues. Name the following quantities and operations used in rotational mechanics. For 10 points each,

A *This* quantity is the rotational analogue of force. When a force is applied perpendicular to a lever arm, *this* quantity is the force applied multiplied by the distance to the pivot.

ANSWER: torque

B Torque is the rotational analogue of force. Therefore, by Newton's Second Law, it is also equal to angular acceleration multiplied by *this* quantity.

ANSWER: rotational inertia [also accept moment of inertia, angular mass, rotational mass, or second moment of mass]

C When the force and lever arm vectors are not orthogonal, *this* vector operation must be used to find torque. Unlike the dot product, this operation yields a vector.

ANSWER: cross product

3. **HISTORY**

During the War of 1812, *this* poet watched from a British ship as the American troops in Fort McHenry raised their flag (\*). Abolitionists criticized *this* poet's words that America was the land of the free—instead referring to it as “the land of the free and the home of the oppressed.” On March 26, 2024, a Baltimore bridge named after *this* poet collapsed. For 10 points, name *this* poet who wrote *The Star-Spangled Banner*, which later became the US national anthem.

ANSWER: Francis Scott Key

3. **MISCELLANEOUS**

In French culinary theory, there are *mother* sauces from which many other *daughter* sauces are derived. Name the following mother sauces by the daughter sauces they're used to make. For 10 points each,

A *This* mother sauce is the base for salsas and many pasta dishes.

ANSWER: tomato sauce

B *This* mother sauce is the base for tartar sauce and ranch dressing.

ANSWER: mayonnaise

C *This* mother sauce is the base for foyot [foe:yote] sauce and is often served with Eggs Benedict.

ANSWER: hollandaise sauce

#### 4. LITERATURE

In *this* cautionary tale, Oceania, Eurasia, and Eastasia are constantly at war, which Emmanuel Goldstein believes is the only way to maintain peace. In *this* novel, Winston Smith is betrayed and captured by members of the Thought Police (\*) who turn him in to the Party. Four government agencies in *this* novel are ironically named the ministries of truth, peace, love, and plenty. For 10 points, name *this* dystopian novel about totalitarianism, written by George Orwell, which popularized terms such as *thoughtcrime*, *doublethink*, and *Big Brother*.

ANSWER: Nineteen Eighty-Four

#### 4. SCIENCE

Every quantity you can think of can be expressed in terms of SI units. Name the following quantities by their definition in SI units. For example, if I said *meters per second*, you would answer *speed* or *velocity*—both are acceptable. For 10 points each,

A *This* quantity is measured in meters cubed.

ANSWER: volume [do **not** accept or prompt on *liter*]

B *This* quantity is measured in ampere-seconds.

ANSWER: electric charge [do **not** accept or prompt on *coulomb*]

C *This* quantity is measured in kilogram-meters squared per second squared.

ANSWER: energy [also accept work or heat (but **not** *temperature*); do **not** accept or prompt on *joule*]

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END OF QUESTION SET

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